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INDEX OF AUTHORS' NAMES.

TRANSACTIONS. 1918.

A.

Allen, Herbert Stanley, atomic and molecular numbers, 389.
 Applebey, Malcolm Percival, and Kenneth Westmacott Lane, double carbonates of sodium and potassium with the heavy metals, 609.

B.

Barger, George, synthesis of 3:4-dihydroxyphenanthrene (morphol) and of 3:4-phenanthraquinone, 218.
 Barger, George, and Arthur James Twiss, the supposed formation of ergotoxine ethyl ester from ergotinine; correction, 235.
 Biddle, Clayton, obituary notice of, 306.
 Birkan, Edward John. See Charles Frederick Cross.
 Birkan, Bertram, and William Henry Woodcock, vacuum balance cases, 81.
 Birkan, Thomas Robert. See James William McBain.
 Birkan, Arthur Joseph, obituary notice of, 300.
 Birkan, Horace Tabberer, the principles of diffusion, their analogies and applications, 559.
 Birkan, Bertram Howard, obituary notice of, 300.

C.

Campbell, Norman Phillips, obituary notice of, 302.
 Carpenter, George Kingsford. See Emil Alphonse Werner.
 Carver, Alexander Macomb, obituary notice of, 307.
 Casman, Alfred Chaston, spinacene and some of its derivatives, 458.
 Cattaway, Frederick Daniel, trimorphic change of 4-nitroaceto-o-toluidide, 897.

Chatterji, Surat Chandra, and Brojendra Nath Ghosh, synthesis of pyranol derivatives, 444.

Cleage, David Alexander. See Gilbert Thomas Morgan.

Clough, George William, the relationship between the optical rotatory powers and the relative configurations of optically active compounds. The influence of certain inorganic haloids on the optical rotatory powers of α -hydroxy-acids, α -amino-acids and their derivatives, 526.

Cohen, Julius Berend, and (Miss) Hannah Smith de Pennington, the relation of position isomerism to optical activity. Part XI. The menthyl alkyl esters of terephthalic acid and its nitro-derivatives, 57.

Copisarow, Maurice, *N*-acyl derivatives of carbazole, 816.

Cox, Henry Edward, the relative activities of methyl, ethyl, and *n*-propyl iodides with sodium α - and β -naphthoxides, 666.

the relative activity of certain alkyl iodides with sodium α -naphthoxide in methyl alcohol, 821.

Crabtree, Herbert Grace, Robert Robinson, and Maurice Russell Turner, a synthesis of isobrazilein and certain related anhydroxyranol salts. Part I., 859.

Cross, Charles Frederick, and Edward John Bevan, esparto cellulose and the problems of constitution, 182.

Cunningham (Miss) Mary, a reinvestigation of the cellulose-dextrose relationship, 173.

a new form of methylgalactoside and its conversion into octamethylidigalactose and into a methylidigalactoside, 596.

the application of the auto-condensation powers of γ -sugars to the synthesis of carbohydrate complexes, 604.

D.

- Dawson, Harry Medforth**, the ternary system: sodium sulphate, ammonium sulphate and water; the utilisation of nitre cake for the production of ammonium sulphate, 675.
- Dawson, Harry Medforth**, and **Christopher Archibald Mountford**, the freezing-points of mixtures of phenol, *o*-cresol, *m*-cresol, and *p*-cresol, 923.
- the estimation of phenol and the three isomeric cresols in mixtures of these substances, 935.
- Denham, Henry George**, the sub-bromide and sub-chloride of lead, 249.
- Dixon, Augustus Edward**, interaction of formaldehyde and carbamide, 238.
- Drew, Harry Dugald Keith**. See **George Senter**.
- Druce, John Gerald Frederick**, the preparation of certain organic stannous and stannic chlorides, 715.
- Dunnelliff, Horace Barratt**, and **Sudarshan Lal**, the basic carbonates of copper, 718.

E.

- Eastick, John Joseph**, obituary notice of, 399.
- Ewins, Arthur James**. See **George Barger**.

F.

- Foxell, Edward William Lanchester**, obituary notice of, 303.

G.

- Gallagher, Patrick Hugh**. See **Alfred Senior**.
- Ghosh, Brojendra Nath**. See **Sarat Chandra Chatterji**.
- Ghosh, Jnanendra Chandra**, the abnormality of strong electrolytes. Part I. Electrical conductivity of aqueous salt solutions, 449.
- the abnormality of strong electrolytes. Part II. The electrical conductivity of non-aqueous solutions, 627.
- the abnormality of strong electrolytes. Part III. The osmotic pressure of salt solutions and equilibrium between electrolytes, 767.
- the electrical conductivity of acids and bases in aqueous solutions, 790.
- Green, Arthur George**, and **Frederick Maurice Bowe**, nitro-derivatives of isoxadiazole oxides and of isoxadiazoles, 67.
- studies in the tetrahydronaphthalene series, 956.

- Green, Arthur George**, and **Kapilran H. Vakil**, studies on the sulphonation of *β*-naphthylamine, 35.
- Grist, William Robinson**. See **Gillen Thomas Morgan**.

H.

- Hartung, Ernst Johannes**, the action of aniline on carbon tetrachloride, 163.
- Haworth, Walter Norman**, and (*Miss Grace Cumming Leitch*), the constitution of the disaccharides. Part II. Lactose and melibiose, 183.
- Hickinbottom, Wilfred John**. See **Joseph Reilly**.
- Hicks, Cedric Stanton**, the dissociation constants of some higher members of the α -oximino-fatty acids, 554.
- Hill, Ernest George**, obituary notice of, 310.
- Holloway, George Thomas**, obituary notice of, 313.
- Holmes, John**, contributions to the theory of solutions; solubility studies in ternary mixtures of liquids, 263.
- Holmes, (Miss) Muriel Catherine Cumming**, the mercury ammonia compounds. Part I., 74.

I.

- Innes, William Ross**, the association of organic compounds in benzene and alcohol solution as determined by the vapour pressure method, 410.

K.

- Kellas, Alex. Mitchell**, the determination of the molecular complexity of liquid sulphur, 903.
- Kemp-Welch, Maurice**, obituary notice of, 303.
- King, Herbert**, obituary notice of, 301.

L.

- Laing, (Miss) Mary Evelyn**, the state of potassium oleate and of oleic acid in solution in dry alcohol, 435.
- Lal, Sudarshan**. See **Horace Barratt Dunnelliff**.
- Lane, Kenneth Westmacott**. See **Malcolm Percival Applebey**.
- Leitch, (Miss) Grace Cumming**. See **Walter Norman Haworth**.
- Letts, Edmund Albert**, obituary notice of, 314.
- Lewis, William Cudmore McCullough**, studies in catalysis. Part IX. The calculation in absolute measure of velocity constants and equilibrium constants in gaseous systems, 471.

M.

- McBain, James William, and Thomas Robert Bolam, the hydrolysis of soap solutions, measured by the rate of catalysis of nitrosotriacetoneamine, 525.
 McEwan, Peter, obituary notice of, 316.
 Mackenzie, John Edwin, mandelimumo-hydrin, 1.
 McKie, (Miss) Phyllis Violet, the freezing point curve of mixtures of toluene-*o*- and *p*-sulphonic acids, 799.
 Martin, Gerald Hargrave. See George Senter.
 Mason, Walter, and Richard Vernon Wheeler, the effect of temperature and of pressure on the limits of inflammability of mixtures of methane and air, 45.
 Masted, Edward Bradford, the synthesis of ammonia at high temperatures, 168, 385.
 Miers, (Sir) Henry Alexander, the old and the new mineralogy, 363.
 Mond, Ludwig, obituary notice of, 318.
 Morgan, Gilbert Thomas, and David Alexander Cleuge, acetyl-*p*-diazonimides derived from substituted *p*-phenylenediamines, 588.
 Morgan, Gilbert Thomas, and William Robinson Griest, acylated *p*-phenylenemethyldiamines, 698.
 Morrell, Robert Selby, studies of drying oils. Part I. The properties of some cerium salts obtained from drying oils, 111.
 Mountford, Christopher Archibald. See Harry Macfarth Dawson.

N.

- Newbery, Edgar, a new method for the determination of conductivity, 701.

O.

- O'Neill, (Miss) Pauline, and Arthur George Perkin, the colouring matters of canwood, barwood, and sanderswood, 125.

P.

- Parker, Leslie Henry, reactions between solid substances, 396.
 Paul, Benjamin Horatio, obituary notice of, 334.
 Payman, William, and Richard Vernon Wheeler, the propagation of flame through tubes of small diameter, 656.

- Pennington, (Miss) Hannah Smith de. See Julius Berend Cohen.
 Perkin, Arthur George. See (Miss) Pauline O'Neill.
 Perkin, William Henry, jun., epiberberine, 492.
 a study of some derivatives of berberine closely allied to derivatives of cryptopine, 722.
 Pitt, Leonard Ison, obituary notice of, 305.
 Pollecoff, (Miss) Fanny, and Robert Robinson, nitro-derivatives of guaiacol, 645.
 Pope, William Jackson, presidential address, 289.
 Pullar, Rufus Daniel, obituary notice of, 336.
 Pymon, Frank Lee, the alkaloids of ipecacuanha. Part III., 222.

R.

- Rae, William Norman, the action of chlorine on the alkali iodides, 880.
 Rakshit, Jitendra Nath, metallic derivatives of alkaloids, 466.
 Rao, Madaya Gopala. See John Lionel Simonsen.
 Ray, Ramas Chandra, the compound $H_2B_2O_4$ and its salts, 803.
 Reilly, Joseph, and Wilfred John Hickinbottom, di-*n*-butylaniline, 99.
 the *n*-butylarylamines. Part I. The action of *n*-butyl chloride on *o*- and *p*-toluidines, 974.
 the *n*-butylarylamines. Part II. Nitration of mono- and di-*n*-butyl-*p*-toluidines, 985.
 Report of the Council, 276.
 Robinson, (Mrs.) Gertrude Maud, and Robert Robinson, a new synthesis of tetraphenylpyrrole, 639.
 Robinson, Robert. See Herbert Grace Crabtree, (Miss) Fanny Pollecoff, and (Mrs.) Gertrude Maud Robinson.
 Rowe, Frederick Maurice. See Arthur George Green.
 Rule, Harold Gordon, amidine salts and the constitution of the so-called imino-hydrins, 3.
 Russell, William James, obituary notice of, 339.

S.

- Schlesinger, Alfred Ulrich Max, water-in-oil emulsions, 522.

Senior, Alfred, and Patrick Hugh Gallagher, studies in phototropy and thermotropy. Part VIII. Cinnamylidenamines, 2:4-dihydroxybenzylideneamines, 28.

Senter, George, Harry Dugald Keith Drew, and Gerald Hargrave Martin, studies on the Walden inversion. Part VII. The influence of the solvent on the sign of the product in the conversion of α -bromo- β -phenylpropionic acid to α -amino- β -phenylpropionic acid (phenylalanine); iminodiphenyldipropionic acid, 151.

Senter, George, and Stanley Horwood Tucker, studies on the Walden inversion. Part VI. The influence of the solvent on the sign of the product in the conversion of phenylbromoacetic acid to phenylaminoacetic acid, 140.

Simonsen, John Lionel, morindone, 768. the nitration of 2- and 6-methoxy-*m*-tolualdehydes and *m*-toluic acids, 775.

Simonsen, John Lionel, and Madyar Gyula Bau, the nitration of 5- and 6-acetylmino-3:4-dimethoxybenzoic acids and 4-acetylaminoveratrole, 22.

the bromination of some derivatives of veratrole, 783.

Stanbridge, Frederick, the hydrates and alcoholate of calcium benzoate, 808.

Steele, (Miss) Elsie Stewart, the structure of crystalline β -methylfructoside, 257.

Strutt, (Hon.) Robert John, recent studies on active nitrogen, 200.

Sutton, Francis, obituary notice of, 350.

Symons, William Henry, obituary notice of, 354.

T.

Tate, Arthur Edwin, obituary notice of, 306.

Tschernjaev, Ilya Ilyitch. See *Leo Alexandrovitch Tschugaev*.

Tschugaev, Leo Alexandrovitch, and Ilya Ilyitch Tschernjaev, hydroxylamine platinum bases, 884.

Tucker, Stanley Horwood. See *George Senter*.

Turner, Maurice Russell. See *Herbert Grace Crabtree*.

Tyrer, Thomas, obituary notice of, 355.

V.

Vakil, Kapilram H. See *Arthur George Green*.

W.

Weinhagen, Albert B., some piperylhydrazones, 585.

Werner, Emil Alphonse, the preparation of α -naphtholphthalein, 20.

the constitution of carbamides. Part V. The mechanism of the decomposition of urea when heated in solution with alkalis and with acids respectively; the hydrolysis of metallic cyanates, 84.

the constitution of carbamides. Part VI. The mechanism of the synthesis of urea from urethane, 622.

the preparation of ethylamine and diethylamine, 899.

Werner, Emil Alphonse, and Georg Kingsford Carpenter, the constitution of carbamides. Part VII. The mechanism of the synthesis of urea from the interaction of carbonyl chloride and ammonia. Part VIII. The formation of urea and of biuret from cyanamide, 694.

Wheeler, Richard Vernon, the inflammation of mixtures of methane and air in a closed vessel, 840.

the oxidation and ignition of coal, 845.

Wheeler, Richard Vernon. See also *Walter Mason, and William Payman*.

White, Gerald Noel, the preparation of a new type of organic sulphur compound, 608.

Williams, Howell. See *Henry Wren*.

Woodcock, Reginald Cordell, obituary notice of, 358.

Woodcock, William Henry. See *Bertus Blount*.

Worsley, Philip John, obituary notice of, 360.

Wren, Henry, studies in the phenylsuccinic acid series. Part VI. Resonance phenomena observed during the investigation of the optically active phenyl- and diphenyl-succinic acids and their derivatives, 210.

Wren, Henry, and Howell Williams, studies in the phenylsuccinic acid series. Part VII. The action of alcohols and amines on *o*-diphenylsuccinic anhydride, 832.

Wright, Robert, "spark-lengths" in hydrocarbon gases and vapours, 72.

INDEX OF SUBJECTS.

TRANSACTIONS, 1918.

Single organic compounds of known empirical formula will be found in the Formula Index, p. 1004.

A.

- Asiatic acid**, $C_{20}H_{30}O_4$.
Acetyl-p-diazoimides, substituted (MORGAN and CLEAGE), 588.
Acids, electrical conductivity of, in aqueous solution (GHOSH), 790.
Address, presidential (POPE), 289.
Alkali iodides, action of chlorine on (RAE), 880.
Alkaloids, metallic derivatives of (RAKSHIT), 466.
Ipecacuanha. See *Ipecacuanha*.
Alkyl iodides, relative activity of, with sodium α -naphthoxide in methyl alcohol (COX), 821.
Amidine salts (RULE), 3.
 α -Amino acids, influence of inorganic haloids on the rotatory power of (CLOUGH), 528.
Ammonia, synthesis of, at high temperatures (MAXTED), 168, 386.
 compounds of mercury salts with (HOLMES), 74.
 action of carbonyl chloride with (WERNER), 694.
Ammonium sulphate, equilibrium of sodium sulphate, water and (DAWSON), 875.
Annual General Meeting, 276.
Association of organic compounds in benzene and alcohol solution (INNES), 410.
Atmospheric air, ignition of mixtures of methane and (MASON and WHEELER), 45; (PAYMAN and WHEELER), 656; (WHEELER), 840.
Atomic numbers (ALLEN), 389.
Azines, preparation of (G. M. and R. ROBINSON), 644.

B.

- Balance**, vacuum, cases for (BLOUNT and WOODCOCK), 81.
Balance sheets of the Chemical Society and of the Research Fund. See **Annual General Meeting**, 276.

- Barium sulphate**, action of sodium carbonate with, in solid form (PARKER), 397.
Barwood, colouring matters of (O'NEILL and PERKIN), 125.
Bases, electrical conductivity of, in aqueous solution (GHOSH), 790.
Berberidene, $C_{20}H_{30}O_4$.
epi-Berberine, $C_{20}H_{30}O_4N$.
Boron :—

- Borohydrates**, constitution of (RAY), 807.
Borous acid, possible existence of, and its salts (RAY), 805.
iso-Brazilin, $C_{18}H_{18}O_6$.
n-Butylarylamines (KEILLY and HICKINBOTTOM), 974, 985.

C.

- Camwood**, colouring matters of (O'NEILL and PERKIN), 125.
Carbamides, constitution of (WERNER), 84, 622; (WERNER and CARPENTER), 694.
Carbon tetrachloride, action of aniline with (HARTUNG), 163.
Catalysis, studies in (LEWIS), 471.
Cellulose, structure and hydrolysis of (CUNNINGHAM), 173.
 esparto, constitution and reactions of (CHASS and BEVAN), 182.
Cerium organic compounds obtained from drying oils (MORRELL), 111.
Chemical constitution and rotatory power of optically active compounds (CLOUGH), 526.
Chemistry, pure and applied, future of (POPE), 289.
Chlorine, action of, on the alkali iodides (RAE), 880.
 Coal, oxidation and ignition of (WHEELER), 945.
Cobalt potassium and sodium carbonates (APPLEBY and LANE), 611.
Codeine, $C_{18}H_{21}O_4N$.

Colouring matters of dye-woods (O'NEILL and PERKIN), 125.

See also Santalin, *iso*Santalin.

Copper carbonates, basic (DUNNICLIFF and LAL), 718.

sodium carbonate (APPLEBEY and LANE), 610.

Cuprous chloride, action of sodium carbonate with, in solid form (PARKER), 405.

Cotarnine, $C_{12}H_{15}O_4N$.

D.

Deoxy-*n*- and -*iso*-santalin, $C_{24}H_{32}O_7$.

Diffusion, principles of (BROWN), 559.

Dimethylolcarbamide, $C_6H_{10}O_3N_4$.

Disaccharides, constitution of (HAWORTH and LEITCH), 188.

Disassociation constants of α -oximino-acids (HICKS), 554.

E.

Electric discharge through hydrocarbon gases (WRIGHT), 79.

Electrical conductivity, determination of (NEWBERRY), 701.

of acids and bases (GHOSH), 790.

of strong electrolytes (GHOSH), 449, 627.

Electrolytes, strong, electrical conductivity of (GHOSH), 449, 627.

osmotic pressure and equilibrium of (GHOSH), 707.

Elements, atomic and molecular numbers of (ALLEN), 389.

***iso*Emetine**, $C_{29}H_{40}O_4N_2$.

Emulsions, water-in-oil (SCHLAEPFER), 522.

Equilibrium constants, calculation of (LEWIS), 471.

Ergotamine, $C_{28}H_{32}O_6N_2$.

Ergotoxine, $C_{38}H_{41}O_8N_2$.

F.

Flame, propagation of, in mixtures of methane and air (MASON and WHEELER), 45; (PAYMAN and WHEELER), 656; (WHEELER), 340.

G.

Gases, electric discharge through (WRIGHT), 79.

ignition of mixtures of (MASON and WHEELER), 45; (PAYMAN and WHEELER), 656; (WHEELER), 340.

H.

Hugo Müller Lecture (MIERS), 363.

Hydrocarbons, gaseous, electric discharge through (WRIGHT), 79.

α -Hydroxy-acids, influence of inorganic haloids on the rotatory power of (CLOUGH), 526.

Hydroxylamine compounds with platinum salts (TSCHUGAEV and TSCHEKJAEV), 884.

I.

Ignition of mixtures of methane and air (MASON and WHEELER), 45; (PAYMAN and WHEELER), 656; (WHEELER), 340.

Iminohydrins, constitution of (RULE), 3.

Ipecacuanha alkaloids (PYMAN), 222.

Isomerism, position, and optical activity (COHEN and DE PENNINGTON), 57.

L.

Lactose, $C_{12}H_{22}O_{11}$.

Lead sub-bromide and sub-chloride (DENHAM), 249.

Lectures, delivered before the Chemical Society (MIERS), 363; (BROWN), 559.

Liquids, ternary mixed, solubility in (HOLMES), 263.

M.

Melibiose, $C_{12}H_{22}O_{11}$.

Mercury salts, compounds of ammonia with (HOLMES), 74.

Metallic cyanates, hydrolysis of (WERNER), 84.

Methylolcarbamide, $C_6H_{10}O_3N_2$.

Mineralogy, old and new (MIERS), 363.

Molecular numbers (ALLEN), 389.

Morindone, $C_{15}H_{10}O_5$.

Morphine, $C_{17}H_{19}O_3N$.

N.

α -Naphtholphthalein, $C_{28}H_{18}O_4$.

Narcotine, $C_{22}H_{23}O_2N$.

Nitrogen, active (STRUTT), 200.

O.

Obituary notices:-
Clayton Beadle, 306.
Arthur Joseph Brearley, 300.
Bertram Howard Buttle, 300.

- Obituary notices:—**
 Norman Phillips Campbell, 302.
 Alexander Macomb Chance, 307.
 John Joseph Eastick, 309.
 Edward William Lauchester Foxell, 303.
 Ernest George Hill, 310.
 George Thomas Holloway, 313.
 Maurice Kemp-Welch, 303.
 Herbert King, 304.
 Edmund Albert Letts, 314.
 Peter MacEwan, 316.
 Ludwig Mond, 318.
 Benjamin Horatio Paul, 334.
 Leonard Ison Pitt, 305.
 Rufus Daniel Pullar, 336.
 William James Russell, 339.
 Francis Sutton, 350.
 William Henry Symons, 354.
 Arthur Edwin Tate, 306.
 Thomas Tyrer, 355.
 Reginald Cowdell Woodcock, 358.
 Philip John Worsley, 360.
Etc. drying (MORRELL), 111.
Optical activity and position isomerism (COHEN and DE PENNINGTON), 57.
inversion, Walden's (SENER and TUCKER), 140; (SENER, DREW, and MARTIN), 151; (CLOUGH), 526.
Optically-active compounds, rotatory power and chemical constitution of (CLOUGH), 526.
Organic compounds, association of, in benzene and alcohol solution (JONES), 410.
Osmotic pressure of salt solutions (GHOSH), 707.
o-Oxadiazoles and their oxides, nitro-derivatives of (GREEN and ROWE), 67.
o-Oximino-acids, dissociation constants of (HICKS), 554.
P.
Phenylsuccinic acid series (WREN), 210; (WREN and WILLIAMS), 832.
Phototropy and thermotropy (SENER and GALLAGHER), 28.
Piperylhydrazones (WEINHAGEN), 585.
Platinum compounds with hydroxylamine (TSCHUGAEV and TSCHERNJAEV), 584.
Potassium cobalt carbonate (APPLEBEY and LANE), 612.
Pyranol derivatives, synthesis of (CHATELJ and GHOSH), 444.
R.
Rotatory power and chemical constitution of optically active compounds (CLOUGH), 526.
S.
Salt solutions, osmotic pressure of (GHOSH), 707.
Salts, electrical conductivity of aqueous solutions of (GHOSH), 449.
Sanderswood, colouring matters of (O'NEILL and PERKINS), 125.
Santal, $C_{15}H_{15}O_2$.
n- and iso-Santalol, $C_{15}H_{15}O_2$.
Santalones, $C_{15}H_{15}O_2$.
Santalol, $C_{15}H_{15}O_2$.
Silver nitrate, action of sodium carbonate with, in solid form (PARKER), 402.
Soap solutions, hydrolysis of (MCBAIN and BOLAM), 825.
Sodium carbonate, action of barium sulphate with, in solid form (PARKER), 397.
in action of cuprous chloride with, in solid form (PARKER), 405.
in action of silver nitrate with, in solid form (PARKER), 402.
cobalt and copper carbonates (APPLEBEY and LANE), 610.
nitrate, use of, in the manufacture of ammonium sulphate (DAWSON), 675.
sulphate, equilibrium of ammonium sulphate, water and (DAWSON), 675.
Solids, reactions between (PARKER), 396.
Solubility in ternary mixed liquids (HOLMES), 263.
Solutions, theory of (HOLMES), 263.
non-aqueous, electrical conductivity of (GHOSH), 627.
Spinacene, $C_{15}H_{15}$.
Stanni- and Stanno-chlorides. See under Tin.
 γ -Sugars, condensation of (CUNNINGHAM), 604.
Sulphur, molecular complexity of (KELLAS), 903.
T.
Tetrahydronaphthalene series (GREEN and ROWE), 955.
Thermotropy and phototropy (SENER and GALLAGHER), 28.
Tin:—
Stanni- and stanno-chlorides, organic (DRECE), 715.
V.
Velocity constants, calculation of (LEWIS), 471.
W.
Walden inversion (SENER and TUCKER), 140; (SENER, DREW, and MARTIN), 151; (CLOUGH), 526.
Water-in-oil emulsions (SCHLAEFFER), 522.

FORMULA INDEX.

THE following index of organic compounds of known empirical formula is arranged according to Richter's system (see *Lexikon der Kohlenstoff-Verbindungen*).

The elements are given in the order C, H, O, N, Cl, Br, I, F, S, P, and the remainder alphabetically.

The compounds are arranged—

Firstly, in groups according to the number of carbon atoms (thus C_1 group, C_2 group, etc.).

Secondly, according to the number of other elements besides carbon contained in the molecule (thus 5 IV indicates that the molecule contains five carbon atoms and four other elements).

Thirdly, according to the nature of the elements present in the molecule (given in the above order).

Fourthly, according to the number of atoms of each single element (except carbon, present in the molecule).

Salts are placed with the compounds from which they are derived. The chlorides, bromides, iodides, and cyanides of quaternary ammonium bases, however, are registered as group-substances.

C_1 Group.

CH_4 Methane, ignition of mixtures of air and (MASON and WHEELER), 45; (WHEELER), 840.

CCl_4 Carbon tetrachloride, action of aniline with (HARTUNG), 163.

1 II

CH_2O Formaldehyde, action of carbamide and (DIXON), 238.

CH_3I Methyl iodide, relative activities of ethyl iodide, propyl iodide and, with sodium α - and β -naphthoxides (COX), 666.

$COCl_2$ Carbonyl chloride, action of ammonia with (WERNER), 694.

1 III

$CHON$ Cyanic acid, metallic salts, hydrolysis of, 84.

CH_3ON_2 Carbamide, synthesis of (WERNER and CARPENTER), 694; mechanism of the synthesis of, from urethane (WERNER), 622; decomposition of, on heating with acids and with alkalis (WERNER), 84; interaction of formaldehyde and (DIXON), 238.

C_2 Group.

C_2H_5I Ethyl iodide, relative activities of methyl iodide, propyl iodide and, with sodium α - and β -naphthoxides (COX), 666.

C_2H_5O Ethyl alcohol, association of organic compounds in solution in (IXES', 410.

C_2H_5N Ethylamine, preparation of (WERNER), 899.

2 III

$C_2H_5O_2N_2$ Oxamide, formation of urea and of biuret from (WERNER and CARPENTER), 693.

C_2H_5ON Glycollamidine, salts of (RULE), 17.

$C_2H_5O_2N_2$ Methylolcarbamide, preparation of (DIXON), 246.

C_3 Group.

C_3H_7I n -Propyl iodide, relative activities of methyl iodide, ethyl iodide and with sodium α - and β -naphthoxides (COX), 666.

3 III

$C_3H_7O_2N$ Urethane, mechanism of the synthesis of urea from (WERNER), 622.

C₁ Group.

- C_4H_9Cl *n*-Butyl chloride, action of, with *o*- and *p*-toluidine (REILLY and HICKINSBOTTOM), 874.
 $C_4H_{11}N$ Diethylamine, preparation of (WERNER), 899; stannochloride of (DRUCE), 715.

4 III

- $C_4H_9O_2N_2$ Acetiminohydrin, preparation of (RULE), 11.

C₂ Group.

- $C_6H_9O_3N_4$ Dimethylolcarbamide, preparation of (DIXON), 247.
 $C_6H_9O_2N$ Methoxyacetiminooethyl ether (RULE), 9.

C₃ Group.

- C_6H_6 Benzene, association of organic compounds in solution in (INNES), 410.

6 II

- C_6H_6O Phenol, freezing points of mixtures of cresols and (DAWSON and MOUNTFORD), 923; estimation of, in mixtures with cresols (DAWSON and MOUNTFORD), 935.
 C_6H_7N Aniline, action of carbon tetrachloride with (HARTUNG), 163.
 $C_6H_8N_4$ *m*- and *p*-Phenylenediamine, stanni- and stanno-chlorides of (DRUCE), 716.
 $C_6H_8O_4$ Dimethyl tartrate, association of, in benzene (INNES), 433.
 $C_6H_7N_2$ Formaldehydepiperylhyazone (WEINHAGEN), 586.

6 III

- $C_8H_6O_4N_4$ 3:5-Dinitrobenzooxadiazole oxide (GREEN and ROWE), 79.
 $C_8H_6O_2N_2$ Methoxyacetiminohydrin (RULE), 9.

C₄ Group.

- C_6H_5O Benzoic acid, calcium salt, hydrates and alcoholates of (STANBRIDGE), 806.
 C_6H_5O *o*-, *m*-, and *p*-Cresol, freezing points of mixtures of phenol and (DAWSON and MOUNTFORD), 923; estimation of, in mixtures with phenol (DAWSON and MOUNTFORD), 935.
 C_6H_7N Benzylamine, stanni- and stanno-chlorides of (DRUCE), 717.
 Methylaniline, stanni- and stanno-chlorides of (DRUCE), 716.
o-Toluidine, stanni- and stanno-chlorides of (DRUCE), 716.
o- and *p*-Toluidine, action of *n*-butyl chloride on (REILLY and HICKINSBOTTOM), 874.
 $C_6H_{11}O_4$ β -Methylfructoside, preparation and structure of (STEULE), 257.
 γ -Methylgalactoside (CUNNINGHAM), 598.

7 III

- $C_6H_3O_3N_3$ Trinitroguaiacol, and its pyridine salt (POLLECOFF and ROBINSON), 635.
 $C_6H_3O_3N_3$ Dinitroguaiacols (POLLECOFF and ROBINSON), 649.
 C_6H_5ON Formanilide, association of, in benzene (INNES), 432.
 C_6H_5OS Toluene-*o*- and -*p*-sulphonic acids, analysis of mixtures of (MCKIE), 799.
 $C_6H_3O_4N_4$ 3:5-Dinitro-2:6-diaminoanisole (POLLECOFF and ROBINSON), 655.
 $C_6H_5O_2N$ Phenylaminoacetic acid, sign of the product in conversion of phenylbromoacetic acid into (SENTER and TUCKER), 140.

7 IV

$C_7H_7O_2NS$ Toluene-*o*- and -*p*-sulphonamides, freezing point curves of mixtures of (McKIE), 799.

C₈ Group.

$C_8H_6O_4$ Terephthalic acid, menthyl alkyl esters of (COHEN and DE PENNINGTON), 57.

$C_8H_8O_2$ Phenylacetic acid, association of, in benzene (INNES), 432.

$C_8H_8O_2$ Methyl salicylate, association of, in benzene (INNES), 431.

$C_8H_{11}N$ *p*-Methylbenzylamine, stannochloride of (DRUCE), 718.

8 III

$C_8H_8O_2N$ Nitroterephthalic acid, menthyl alkyl esters of (COHEN and DE PENNINGTON), 57.

$C_8H_8O_2N_4$ 4-Acetyl-2- and -3-*p*-phenylene-1-diazo-4-imides (MORGAN and CLEAGE), 591.

$C_8H_8O_2Br$ Phenylbromoacetic acid, sign of the product in conversion of into phenylaminoacetic acid (SEETER and TUCKER), 140.

$C_8H_8O_3N$ 8-Nitro-2-methoxybenzoic acid (SIMONSEN), 782.

$C_8H_8O_4N_3$ 3:5:6-Trinitroveratrole (POLLECOFF and ROBINSON), 654.

$C_8H_8O_2N_2$ *p*-Nitromethylformanilide (MORGAN and GRIST), 690.

$C_8H_8O_2N_2$ 5:6-Dinitroguaiacol methyl ether (POLLECOFF and ROBINSON), 651.

C_8H_8ON Acetanilide, association of, in benzene (INNES), 433.

Acetophenoneoxime, association of, in benzene (INNES), 432.

$C_8H_8O_2N$ Mandeliminehydrin (MACKENZIE), 1; (RULE), 12.

$C_8H_8O_2N_2$ Formylmethylaminobenzene-4-diazo-hydroxide (MORGAN and GRIST), 692.

$C_8H_8O_2Br$ 3-Bromoveratrole (SIMONSEN and RAU), 785.

$C_8H_8O_2N$ 6-Nitro-*o*-tolyl methyl ether (SIMONSEN), 781.

$C_8H_{10}ON_2$ *p*-Aminomethylformanilide (MORGAN and GRIST), 691.

$C_8H_{10}O_2N_2$ 5-Nitro-4-aminoveratrole (SIMONSEN and RAU), 27.

8 IV

$C_8H_8ON_2Cl_2$ 4-Acetyldichloro-*p*-phenylene-1-diazo-4-imides (MORGAN and CLEAGE), 594.

$C_8H_8O_2NCl$ *p*-Chloromandelamide, and its salts (RULE), 17.

$C_8H_{10}O_2NBr$ Bromoaminoveratroles (SIMONSEN and RAU), 786.

C₉ Group.

$C_9H_8O_2$ Cinnamic acid, association of, in benzene (INNES), 431.

$C_9H_{10}O_2$ Ethyl *p*-hydroxybenzoate, association of, in benzene (INNES), 434.
2-Methoxy-*m*-toluic acid, and its silver salt (SIMONSEN), 779.

9 III

$C_9H_8O_2Br$ α -Bromo- β -phenylpropionic acid, sign of the product in conversion of, into α -amino- β -phenylpropionic acid (SEETER, DREW, and MARTIN), 151.

$C_9H_8O_2N$ 5-Nitro-2- and -6-methoxy-*m*-tolualdehydes (SIMONSEN), 778.

$C_9H_8O_3N$ 5-Nitro-2- and -6-methoxy-*m*-toluic acids, and their salts (SIMONSEN), 779.

$C_9H_{10}O_2N_2$ 4-Nitroaceto-*o*-toluidide, trimorphism of (CHATTAWAY), 897.

$C_9H_{10}O_2N_2$ 6-Nitro-5-amino-3:4-dimethoxybenzoic acid (SIMONSEN and RAU), 28.

$C_9H_{10}O_2N_2$ 4:6-Dinitro-1:2:3-trimethoxybenzene (POLLECOFF and ROBINSON), 656.

- $H_{11}O_2N$ α -Amino- β -phenylpropionic acid, sign of the product in conversion of α -bromo- β -phenylpropionic acid into (SESTER, DREW, and MARTIN), 151.
 $2-Methoxy-m$ -tolualdoxime (SIMONSEN), 777.
 $H_{11}O_2N_2$ Acetylmethylaminobenzene-4-diazo-hydroxide (MORGAN and GRIST), 692.
 $H_{11}O_2N$ 5-Amino-3:4-dimethoxybenzoic acid, and its salts (SIMONSEN and RAU), 24.
 H_9ON_2 p -Aminomethylacetanilide (MORGAN and GRIST), 691.
 $H_{10}O_2N_2$ Nitrosotriacetoneamine, velocity of catalysis of (MCBAIN and BOLAM), 825.

9 IV

- $H_{10}O_2NBr$ Bromoaminoveratric acids (SIMONSEN and RAU), 789.

C₁₀ Group.

- H_{10} Hydrocarbon, from spinacene and sodium (CHAPMAN), 464.

10 II

- H_8O_2 1-Hydrindone-2-carboxylic acid (ROBINSON and CRABTREE), 879.
 H_8S_2 β -Naphthylthiosulphoxylic acid, and its sodium salt (WHITE), 608.
 H_8N β -Naphthylamine, sulphonation of (GREEN and VAKIL), 35.
 $H_{10}O_4$ Phenylsuccinic acids, optical activity of, and their esters (WREN), 210.
 $H_{11}Cl$ α -Chloro- ar -tetrahydronaphthalene (GREEN and ROWE), 971.
 $H_{10}O_4$ 5:6-Dimethoxy- o -toluic acid (PERKIN), 762.
 $H_{12}N$ ar -Tetrahydro- α -naphthylamine, preparation and reactions of (GREEN and ROWE), 955.
 $H_{12}N$ Aminobutylbenzene (REILLY and HICKINBOTTOM), 983.

10 III

- $C_{10}H_8O_4N_4$ Dinitronaphth~~is~~oxadiazole (GREEN and ROWE), 72.
 $C_{10}H_8O_4N_4$ Nitronaphth~~is~~oxadiazole (GREEN and ROWE), 72.
 $C_{10}H_7ONa$ Sodium α -naphthoxide, relative activity of alkyl iodides with, in methyl alcohol (COX), 821.
 Sodium α - and β -naphthoxides, relative activities of alkyl iodides with (COX), 666.
 $C_{10}H_7O_2N_2$ 2:4-Dinitro- ar -tetrahydro- α -naphthol (GREEN and ROWE), 969.
 $C_{10}H_7O_2N$ 2- and 4-Nitro- ar -tetrahydro- α -naphthol (GREEN and ROWE), 968.
 $C_{10}H_7O_2N_2$ 2:4-Dinitro- ar -tetrahydro- α -naphthylamine, and its potassium salt (GREEN and ROWE), 962.
 $C_{10}H_7O_2N_2$ 4-Nitro- ar -tetrahydro- α -naphthylamine, and its salts (GREEN and ROWE), 960.
 $C_{10}H_7O_4N_4$ Semicarbazones of 5-nitro-2- and -6-methoxy- m -tolualdehydes (SIMONSEN), 778.
 $C_{10}H_7O_4S$ ar -Tetrahydro- α -naphthol-4-sulphonic acid, and its sodium salt (GREEN and ROWE), 967.
 $C_{10}H_7O_4N_2$ 5-Nitro-4-acetylamino- ar -tetrahydro- α -naphthol (SIMONSEN and RAU), 27.
 $C_{10}H_7O_4N_2$ 2-Methoxy- m -tolualdehyde semicarbazone (SIMONSEN), 777.
 $C_{10}H_7ON$ Camphoroxime, association of, in benzene (INNES), 432.

10 IV

- $C_{10}H_7O_4N_2Cl$ 1-Chloro-2:4-dinitro- ar -tetrahydronaphthalene (GREEN and ROWE), 972.

$C_{10}H_7O_4NS$ 2-Nitro-*ar*-tetrahydro- α -naphthol-4-sulphonic acid (GARD and ROWE), 967.

$C_{10}H_{13}O_2NCl$ *p*-Chloromandeliminohydrin (RULE), 15.

$C_{10}H_{11}O_2NBr$ Bromoacetylaminoveratroles (SIMONSEN and RAU), 785, 790.

C_{11} Group.

$C_{11}H_{17}N$ *n*-Butyl-*o*- and -*p*-toluidines, and their salts (REILLY and HICKINBOTTOM), 978.

$C_{11}H_{23}O_9$ Tetramethyl- γ -methylgalactoside (CUNNINGHAM), 599.
Tetramethyl- β -methylglucoside, preparation of (HAWORTH and LEITCH), 194.

11 III

$C_{11}H_{13}O_3N_2$ 6-Nitro-5-acetyl-amino-3:4-dimethoxybenzoic acid (SIMONSEN and RAU), 25.

$C_{11}H_{13}O_4Br$ 6-Bromo-3:4-dimethoxy-*S*-phenylpropionic acid (CHARTER and ROBINSON), 871.

$C_{11}H_{13}O_3N$ Acetyl-amino-3:4-dimethoxybenzoic acids (SIMONSEN and RAU), 25.

$C_{11}H_{13}O_2N_2$ 2:3:5-Trinitro-*p*-tolyl-*n*-butylnitrosoamine (REILLY and HICKINBOTTOM), 993.

$C_{11}H_{13}O_2N_2$ 2:3:5-Trinitro-*p*-tolyl-*n*-butylnitrosoamine (REILLY and HICKINBOTTOM), 993.

$C_{11}H_{13}O_2N_2$ 3:5-Dinitro-*p*-tolyl-*n*-butylnitrosoamine (REILLY and HICKINBOTTOM), 991.

$C_{11}H_{13}O_2N_2$ 3:5-Dinitro-*p*-tolyl-*n*-butylnitrosoamine (REILLY and HICKINBOTTOM), 992.

$C_{11}H_{13}O_2N_2$ 2-Nitro-*p*-tolyl-*n*-butylnitrosoamine (REILLY and HICKINBOTTOM), 989.

$C_{11}H_{13}O_2N_2$ 3:5-Dinitro-*n*-butyl-*p*-toluidine (REILLY and HICKINBOTTOM), 990.

$C_{11}H_{13}ON$ 5-Nitroso-*n*-butyl-*o*-toluidine, and its salts (REILLY and HICKINBOTTOM), 982.

o- and -*p*-Tolyl-*n*-butylnitrosoamine (REILLY and HICKINBOTTOM), 979.

$C_{11}H_{13}O_2N$ Nitro-*n*-butyl-*p*-toluidines, and their salts (REILLY and HICKINBOTTOM), 988.

11 IV

$C_{11}H_{13}O_2NBr$ Bromoacetylaminoveratric acids (SIMONSEN and RAU), 783.

C_{12} Group.

$C_{12}H_9N_2$ Azobenzene, association of, in benzene and alcohol (INNES), 430.

$C_{12}H_{22}O_{11}$ Lactose and Melibiose, constitution of (HAWORTH and LEITCH), 188.

12 III

$C_{12}H_9O_4N_4$ Dinitronaphtho-xo-xadiazole oxide (GREEN and ROWE), 71.

$C_{12}H_9O_3N_2$ 2:4-Dinitro-*ar*-tetrahydroaceto- α -naphthalide (GREEN and ROWE), 961.

$C_{12}H_9O_3N_2$ 4-Nitro-*ar*-tetrahydroaceto- α -naphthalide (GREEN and ROWE), 959.

$C_{12}H_{15}O_2N$ Cotarnine, sodium salt (RAKSHIT), 469.

$C_{12}H_{15}ON_2$ 1-Acetyl-*ar*-tetrahydro-1:4-naphthylenediamine (GREEN and ROWE), 959.

p-Hydroxybenzaldehydepiperilyhydrazone (WEINHAGEN), 586.

Salicylaldehydepiperilyhydrazone (WEINHAGEN), 585.

C₁₃ Group.

- $\text{}_{12}\text{H}_{10}\text{O}$ Benzophenone, association of, in benzene (INNES), 430.
 $\text{}_{12}\text{H}_{12}\text{N}_2$ *p*-Aminoacetophenonepiperylhydrazones (+H₂O) (WEINHAGEN), 587.
 $\text{}_{12}\text{H}_{12}\text{O}_{11}$ Methylbigalactoside (CUNNINGHAM), 802.

13 III

- $\text{}_{11}\text{H}_{11}\text{ON}$ Formyldiphenylamine, association of, in benzene (INNES), 431.
 $\text{}_{11}\text{H}_{11}\text{O}_4\text{N}$ 2:4-Dihydroxybenzylideneaniline (SENIER and GALLAGHER), 33.
 $\text{}_{12}\text{H}_{12}\text{O}_2\text{N}_2$ Piperonalpiperylhydrazones (WEINHAGEN), 585.
 $\text{}_{12}\text{H}_{12}\text{O}_2\text{N}_2$ 3:5-Dinitroaceto-*n*-butyl-*p*-toluidide (REILLY and HICKINBOTTOM), 990.
 $\text{}_{11}\text{H}_{11}\text{ON}_2$ Anisaldehydepiperylhydrazones (WEINHAGEN), 588.
 $\text{}_{12}\text{H}_{12}\text{O}_2\text{N}_2$ Nitroaceto-*n*-butyl-*p*-toluidides (REILLY and HICKINBOTTOM), 989.
 $\text{}_{11}\text{H}_{11}\text{ON}$ Aceto-*n*-butyl-*o*- and -*p*-toluidides (REILLY and HICKINBOTTOM), 979.

13 IV

- $\text{}_{11}\text{H}_{10}\text{O}_2\text{NBr}$ 2:4-Dihydroxybenzylidenebromoanilines (SENIER and GALLAGHER), 34.

C₁₄ Group.

- $\text{}_{14}\text{H}_{12}$ Phenanthrene, association of, in benzene and alcohol (INNES), 431.

14 II

- $\text{}_{14}\text{H}_8\text{O}$ 3:4-Phenanthraquinone (BARGER), 220.
 $\text{}_{14}\text{H}_{10}\text{O}$ Benzil, association of, in benzene and alcohol (INNES), 430.
 $\text{}_{14}\text{H}_{12}\text{O}_2$ 8:4-Dihydroxyphenanthrene (*morphol*), synthesis of (BARGER), 218.
 $\text{}_{14}\text{H}_{12}\text{N}$ Di-*n*-butylaniline, and its salts (REILLY and HICKINBOTTOM), 99.
 $\text{C}_{14}\text{H}_{12}\text{N}_2$ *p*-Phenylenedi-*n*-butyldiamine, and its hydrochloride (REILLY and HICKINBOTTOM), 107.

14 III

- $\text{C}_{14}\text{H}_{11}\text{O}_2\text{N}$ γ -Benzilmonoxime, association of, in benzene (INNES), 432.
 $\text{C}_{14}\text{H}_{13}\text{O}_2\text{N}$ 2:4-Dihydroxybenzylidene-*m*-toluidine (SENIER and GALLAGHER), 34.
 $\text{C}_{14}\text{H}_{15}\text{ON}_2$ *p*-Nitrosodi-*n*-butylaniline, and its salts (REILLY and HICKINBOTTOM), 103.

C₁₅ Group.

- $\text{C}_{15}\text{H}_{12}\text{O}$ Morindone, constitution and reactions of (SIMONSEN), 766.
 $\text{C}_{15}\text{H}_{12}\text{O}_4$ Santol (O'NEILL and PERKIN), 137.
 $\text{C}_{15}\text{H}_{14}\text{N}$ Di-*n*-butyl-*p*-toluidine, and its salts (REILLY and HICKINBOTTOM), 980.

15 III

- $\text{C}_{15}\text{H}_{10}\text{O}_{11}\text{N}_2$ 3:5-Dinitro-2-methoxyphenyl carbonate (POLLECOFF and ROBINSON), 649.
 $\text{C}_{15}\text{H}_{12}\text{O}_2\text{N}_2$ 5-Nitro-2-methoxyphenyl carbonate (POLLECOFF and ROBINSON), 648.
 $\text{C}_{15}\text{H}_{12}\text{NCl}$ Cinnamylidenechloroanilines (SENIER and GALLAGHER), 30.
 $\text{C}_{15}\text{H}_{12}\text{NBr}$ Cinnamylidenebromoanilines (SENIER and GALLAGHER), 30.
 $\text{C}_{15}\text{H}_{12}\text{O}_2\text{N}_2$ 2-Nitrodi-*n*-butyl-*p*-toluidine, and its hydrochloride (REILLY and HICKINBOTTOM), 994.

15 IV

- $\text{C}_{15}\text{H}_{12}\text{O}_2\text{NBr}$ Benzoyl derivatives of bromoaminoveratroles (SIMONSEN and RAU), 786.

C₁₆ Group.

- C₁₆H₁₆O₂** 7-Hydroxy-4:8-indeno-1:2-benzoquinone (ROBINSON and CHATREE), 879.
C₁₆H₁₄O₂ *trans*-Diphenylsuccinic anhydride, action of alcohols and amines (WREN and WILLIAMS), 832.
 7-Methoxyphenylbenzopyrones (ROBINSON and TURNER), 875.
C₁₆H₁₂O₅ *iso*Brazilein, synthesis of salts of (CHATREE and ROBINSON), 859.
 Morindone methyl ether (SIMONSEN), 773.
C₁₆H₁₄O₆ Santal (O'NEILL and PERKIN), 136.
C₁₆H₁₄O₄ Diphenylsuccinic acids, optical activity of, and their esters (WREN), 210.
C₁₆H₁₆O 2-Hydroxy-4-methoxyphenyl phenylethyl ketone (CHATREE and ROBINSON), 870.
C₁₆H₃₂O₂ Palmitic acid, cerous salt (MORRELL), 116.
C₁₆H₃₄O Hexadecyl alcohol, association of, in benzene and alcohol (ISSEN) 431.

16 III

- C₁₆H₁₅O₂Cl** 7-Methoxy-2-phenyl-1:4-benzopyranol anhydrohydrochloride (+ 3H₂O), (ROBINSON and TURNER), 877.
C₁₆H₁₁O₂N₂ Cinnamylidenenitrotoluidines (SENIER and GALLAGHER),
C₁₆H₁₁ON Cinnamylidene-*p*-anisidine (SENIER and GALLAGHER), 31.
C₁₆H₁₃O₂N₂ 2:4-Dinitro-*ac*- and -*ar*-tetrahydro- α -naphthylamines (GREEN and ROWE), 972.
C₁₆H₁₅O₂N₂ Phenylacetiminohydrin (RULE), 11.
C₁₆H₁₅O₂N₂ Mandeliminohydrin, preparation of (RULE), 12.

16 IV

- C₁₆H₁₅O₂N₃S** 4-*p*-Sulphobenzeneazo-*n*-butylaniline, sodium salt (REILLY and HICKINBOTTOM), 111.

C₁₇ Group.

- C₁₇H₁₄O₂** 3-Acetyl-2-phenyl-1:4-benzopyranol or 3-Benzoyl-2-methyl-1:4-benzopyranol (+ H₂O), and its anhydrohydrochloride (CHATTERJI and GHOSH), 446.
 7-Hydroxy-3-benzyl-2-methyl-1:4-benzopyrone (CHATREE and ROBINSON), 867.
 Salicylidenebenzoylacetone (+ $\frac{1}{2}$ H₂O), and its anhydrohydrochloride (CHATTERJI and GHOSH), 447.
C₁₇H₁₅O₃ Substance, from acetylacetone and salicylaldehyde (CHATTERJI and GHOSH), 448.
C₁₇H₁₆O₄ 2:4-Dimethoxydibenzoylmethane (ROBINSON and TURNER), 876.
 Methyl hydrogen *trans*-diphenylsuccinate, and its sodium salt (WREN and WILLIAMS), 837.
C₁₇H₁₇N Cinnamylidene-*p*-xylylidine (SENIER and GALLAGHER), 32.

17 III

- C₁₇H₁₅O₂N** 2:4-Dihydroxybenzylidene- β -naphthylamine (SENIER and GALLAGHER), 32.
C₁₇H₁₇ON Cinnamylidene-*p*-phenetidine (SENIER and GALLAGHER), 32.
C₁₇H₁₉O₂N Morphine, calcium salt (RAKSHIT), 470.
C₁₇H₂₉O₂N₂ Osazone of sugar from morindiu (SIMONSEN), 774.
C₁₇H₂₃O₂N 2:4-Dihydroxybenzylidenecamphylamine (SENIER and GALLAGHER), 35.

17 IV

- C₁₇H₂₁O₄N₂S** 4-Methyl-*N*-*n*-butyldiazoaminobenzene-4'-sulphonic acid, and its salts (REILLY and HICKINBOTTOM), 984.

C₁₈ Group.

- H_{18}O_4 7-Hydroxy-3-benzyl-2-methyl-1:4-benzopyrone methyl ether (CRABTREE and ROBINSON), 867.
 H_{18}O_5 Morindone trimethyl ether (SIMONSEN), 772.
 H_{18}O_5 Ethyl hydrogen *r*- and *meso*-diphenylsuccinates, and their metallic salts (WREN and WILLIAMS), 835.
 H_{18}O_5 2-Hydroxy-4-methoxyphenyl 3:4-dimethoxyphenylethyl ketone (CRABTREE and ROBINSON), 871.
 H_{18}O_4 Menthyl hydrogen terephthalate (COHEN and DE PENNINGTON), 64.
 H_{18}O_2 Linolenic acid, cerous salt (MORRELL), 119.
 H_{18}O_2 α - and β -Elaeostearic acids, cerous and lead salts (MORRELL), 117.
 H_{18}O_2 Linoleic acid, cerous salt (MORRELL), 117.
 H_{18}O_2 Elaidic acid, cerous salt (MORRELL), 117.
 H_{18}O_2 Oleic acid, and its potassium salt, molecular condition of, in alcoholic solution (LAING), 435; cerous salt (MORRELL), 117.
 H_{18}O_2 Stearic acid, cerous salt (MORRELL), 112.

18 III

- $\text{H}_{18}\text{O}_2\text{N}_2$ Formylmethylaminobenzene-4-azo- β -naphthol (MORGAN and GRIST), 692.
 $\text{H}_{18}\text{O}_2\text{N}_2$ Cinnamylidenenitro- ψ -cumidine (SENIER and GALLAGHER), 32.
 $\text{H}_{18}\text{O}_2\text{N}$ α -Imino- $\beta\beta$ -diphenyldipropionic acid (SENIER, DREW, and MARTIN), 161.
 H_{18}ON Benzo-*n*-butyl-*p*-toluidide (REILLY and HICKINBOTTOM), 979.
 $\text{H}_{18}\text{O}_2\text{N}$ Codeine, potassium and sodium salts of (RAKSHIT), 466.
 $\text{H}_{18}\text{O}_2\text{N}$ Menthyl hydrogen nitroterephthalate (COHEN and DE PENNINGTON), 64.

C₁₉ Group.

- H_{19}O_4 7-Acetoxy-3-benzyl-2-methyl-1:4-benzopyrone (CRABTREE and ROBINSON), 867.
 H_{19}O_4 Methyl menthyl terephthalate (COHEN and DE PENNINGTON), 63.
 $\text{H}_{19}\text{O}_{11}$ Hexamethyl methylgalactoside (HAWORTH and LEITCH), 195.

19 III

- $\text{H}_{19}\text{O}_2\text{N}$ *o*-Nitromethyl menthyl terephthalate (COHEN and DE PENNINGTON), 66.

C₂₀ Group.

- H_{20}O_4 3':4'-Methylenedioxy-2-phenyl-2:3-dihydro-1:4- α -naphthapyrone (CRABTREE and ROBINSON), 865.
 H_{20}O_7 Diacetylmorindone methyl ether (SIMONSEN), 774.
 H_{20}O_4 Berberidene (PERKIN), 761.
 H_{20}O_5 Ketodihydroberberidene (PERKIN), 763.
 H_{20}O_4 Ethyl menthyl terephthalate (COHEN and DE PENNINGTON), 63.
 H_{20}O_2 Abietic acid, cerous salt (MORRELL), 120.
 $\text{H}_{20}\text{O}_{11}$ Heptamethyl methylgalactoside (HAWORTH and LEITCH), 195.
 $\text{H}_{20}\text{O}_{11}$ Octamethyl digalactose (CUNNINGHAM), 601.

20 III

- $\text{H}_{20}\text{O}_2\text{N}$ *N*-Phenoxyacetylcarbazole (COPISAROW), 818.
 $\text{H}_{20}\text{O}_2\text{N}_2$ Acetylmethylaminobenzene-4-azo- β -naphthol (MORGAN and GRIST), 694.
 $\text{H}_{20}\text{O}_2\text{N}$ Oxyberberine, preparation of (PERKIN), 737.
 α - and β -Oxyberberines (PERKIN), 518.

$C_{20}H_{19}O_2N$ Dihydroanhydro-*n*- and -*epi*-berberines, and their salts (PERKIN, 506, 737).

$C_{20}H_{19}O_2N$ *epi*Berberine, and its salts (PERKIN), 492.

$C_{20}H_{21}O_2N$ Tetrahydroanhydro*epi*berberine, and its salts (PERKIN), 510.

$C_{19}H_{17}O_2N$ Nitroethyl menthyl terephthalates (COHEN and DE P. NINGTON), 66.

20 IV

$C_{28}H_{27}O_2N_2S$ 4-*p*-Sulphobenzeneazodi-*n*-butylaniline, sodium and potassium salts (REILLY and HICKINBOTTOM), 109.

C₂₁ Group.

$C_{21}H_{14}O_8$ Acetylmorindone (SIMONSEN), 770.

21 III

$C_{21}H_{17}O_2N_2$ Hydroxymethoxyphenanthraphenazines (POLLECOFF and ROBINSON), 651.

$C_{21}H_{20}O_2N_2$ 5:5'-Dinitro-2:2' and -4:4'-dimethoxydi-3-*m*-methylstyryl ketones (SIMONSEN), 778.

$C_{21}H_{21}O_2N$ Anhydromethylberberines, and their salts (PERKIN), 746, 754.

$C_{21}H_{21}O_2N$ *O*-Methyle*pi*berberine (PERKIN), 520.

$C_{21}H_{21}O_2N$ Trioxyanhydromethylberberine (PERKIN), 747.

$C_{21}H_{21}O_2N$ Hydroxyisohanhydrodihydromethylberberines (PERKIN), 753.

$C_{21}H_{21}O_2N_2$ Semicarbazone of ketodihydroberberidene (PERKIN), 753.

$C_{21}H_{21}ON$ *N*-Nonoylcarbazole (COPISAROW), 818.

$C_{21}H_{23}O_2N$ Dihydromethylisotetrahydroanhydroberberine, and its salts (PERKIN), 759.

21 IV

$C_{21}H_{22}O_2NCl$ ψ -Methylberberinium chloride (+H₂O) (PERKIN), 750.

$C_{21}H_{22}O_2NI$ ψ -Berberinium iodide (PERKIN), 751.

$C_{21}H_{24}O_2NI$ *N*-Methylisotetrahydroanhydroberberine hydriodide (PERKIN), 748.

C₂₂ Group.

$C_{22}H_{19}O_8$ 7-Methoxy-2:4-diphenyl-1:4-benzopyranol, and its salts (ROSSON and TURNER), 877.

22 III

$C_{22}H_{19}O_2N$ *r*-Diphenylsuccinanic acid (WREN and WILLIAMS), 837.

$C_{22}H_{23}O_2N$ *O*-Ethyle*pi*berberine (PERKIN), 521.

$C_{22}H_{23}O_2N$ Narcotine, potassium and sodium salts (RAKSHIT), 467.

$C_{22}H_{27}O_2N$ Dihydrodimethylisotetrahydroanhydroberberine, and its salts (PERKIN), 760.

$C_{22}H_{29}O_2N$ Nitrobutyl menthyl terephthalates (COHEN and DE P. NINGTON), 66.

C₂₃ Group.

$C_{23}H_{19}O_2N$ Diphenylsuccino-*p*-tolil (WREN and WILLIAMS), 839.

$C_{23}H_{21}O_2N$ *meta*- and -*r*-Diphenylsuccino-*p*-toluidic acid, and the silver salt of the latter (WREN and WILLIAMS), 838.

$C_{23}H_{21}O_2N_2$ Phenylhydrazone of substance $C_{17}H_{15}O_2$ (CHATTERJEE and GHOSH), 449.

$C_{23}H_{23}O_2N$ Anhydro*epi*berberineacetone (PERKIN), 521.

$C_{23}H_{25}O_2N$ Acetoxyisohanhydrodihydromethylberberines (PERKIN), 753.

C₂₄ Group.

$C_{24}H_{25}N_2$ Dicinnamylidene-*p*-phenylenediamine (SENIER and G. LAGHER), 32.

- $^{11}\text{H}_{11}\text{O}_2$ Substance, from acetylacetone and salicylaldehyde (CHATTERJI and GHOSH), 448.
 $^{11}\text{H}_{11}\text{O}_2$ Deoxy-*n*- and -*iso*-santalin (O'NEILL and PERKIN), 130, 133.
 $^{11}\text{H}_{11}\text{O}_3$ *n*- and -*iso*-Santalin (O'NEILL and PERKIN), 127, 131.
 $^{11}\text{H}_{11}\text{O}_4$ *cyclo*Hexyl menthyl terephthalate (COHEN and DE PENNINGTON), 63.

24 III

- $^{11}\text{H}_{11}\text{O}_2\text{N}$ Methyl *r*-diphenylsuccino-*p*-toluidate (WREN and WILLIAMS), 839.
 $^{12}\text{H}_{12}\text{ON}_2$ 4-Di-*n*-butylaminobenzeneazo- β -naphthol (REILLY and HICKIN-BOTTOM), 108.

C₂₅ Group.

- $^{16}\text{H}_{16}\text{O}_7$ Santalone (O'NEILL and PERKIN), 138.
 $^{23}\text{H}_{23}\text{O}_{11}$ Methyltetragalactoside and Methyltetraglucoside (CUNNINGHAM), 606.

25 III

- $\text{C}_{25}\text{H}_{18}\text{ON}_2$ *N*-Carbonylcarbazole (COPISAROW), 819.

C₂₆ Group.

- $\text{C}_{26}\text{H}_{18}\text{N}_2$ Dicinnamylidene-*o*-naphthylenediamine (SENIER and GALLAGHER), 33.
 $\text{C}_{26}\text{H}_{24}\text{O}_4$ Octyl menthyl terephthalate (COHEN and DE PENNINGTON), 63.

26 III

- $^{20}\text{H}_{20}\text{O}_4\text{N}_2$ *N*-Oxalylcarbazole (COPISAROW), 819.

C₂₇ Group.

- $^{17}\text{H}_{17}\text{O}_3$ Substance ($+\frac{1}{2}\text{H}_2\text{O}$), from benzoylacetone and salicylaldehyde (CHATTERJI and GHOSH), 446.

C₂₈ Group.

- $^{22}\text{H}_{22}\text{O}_4$ α -Naphtholphthalein, preparation of (WERNER), 20.
 $^{23}\text{H}_{23}\text{O}_4$ Piperonylidene derivative of 3',4'-methylenedioxy-2-phenyl-2,3-dihydro-1:4- α -naphthapyrone (CRABTREE and ROBINSON), 865.
 $^{28}\text{H}_{28}\text{N}$ Tetraphenylpyrrole, synthesis of (G. M. and R. ROBINSON), 639.
 $\text{C}_{28}\text{H}_{24}\text{O}_4$ Menthyl terephthalate (COHEN and DE PENNINGTON), 64.

28 III

- $\text{C}_{28}\text{H}_{30}\text{ON}$ *N*-Palmitylcarbazole (COPISAROW), 819.
 $\text{C}_{28}\text{H}_{31}\text{O}_4\text{N}$ Menthyl nitroterephthalate (COHEN and DE PENNINGTON), 64.

C₂₉ Group.

- $\text{C}_{29}\text{H}_{28}$ Spinacene, analysis and reactions of, and its hexahydro-bromide and -chloride (CHAPMAN), 458.

29 III

- $\text{C}_{29}\text{H}_{26}\text{O}_4\text{N}_2$ *iso*Emetine ($+\text{H}_2\text{O}$), and its salts (PYMAN), 226.

C₃₀ Group.

- $\text{C}_{30}\text{H}_{24}\text{N}_2$ Dicinnamylidenbenzidine (SENIER and GALLAGHER), 33.

30 III

- $\text{C}_{30}\text{H}_{26}\text{O}_4\text{N}_2$ *N*-Methylisometine (PYMAN), 228.

C₃₂ Group.

- $\text{C}_{32}\text{H}_{30}\text{O}_{11}$ Acetyl-*n*- and -*iso*-santalin (O'NEILL and PERKIN), 128.
 $\text{C}_{32}\text{H}_{31}\text{O}_{11}$ Acetyldeoxy-*n*- and -*iso*-santalin (O'NEILL and PERKIN), 130, 134.

32 III

$C_{27}H_{40}O_4N_2$ *N*-Methylisoeqmetinemethine, and its salts (PYMAN), 229.

32 IV

$C_{23}H_{26}O_4N_2Cl_2$ *N*-Methylemetine methochlorides (PYMAN), 233.

$C_{23}H_{26}O_4N_2I_2$ *N*-Methyl-*n*- and -*iso*-emetine methiodides (PYMAN), 233.

 C_{35} Group.

$C_{35}H_{49}O_4N_2$ Ergotinine, supposed formation of ergotoxine ethyl ester *tri* (BARGER and EWINS), 235.

$C_{35}H_{49}O_4N_2$ Ergotoxine, formation of the phosphate of, from ergotinin (BARGER and EWINS), 235.

 C_{36} Group.

$C_{36}H_{50}O_4$ Benzoylmorindone (SIMONSEN), 771.

 C_{37} Group.

$C_{37}H_{54}O_{11}$ Methyltrimaltoside (+ H_2O) (CUNNINGHAM), 607

ERRATA.

VOL. CXI. (TRANS., 1917).

Page	Line	
243	15*	for "water" read "oxygen."
774	15*	,, "sodium hypochlorite" read "potassium permanganate."

VOL. CXIII. (TRANS., 1918).

31	19	,, " $C_{16}H_{15}O_2N_2$ " read " $C_{16}H_{14}O_2N_2$."
100	3*	,, "4-di- <i>n</i> -butylaminazobenzene-4'-sulphonic acid" read "4-sulphobenzeneazodi- <i>n</i> -butylaniline."
100	1	,, "4- <i>n</i> -butylaminazobenzene-4'-sulphonic acid" read "4- <i>p</i> -sulphobenzeneazo- <i>n</i> -butylaniline."
122	16*	,, " $C_{63}(C_{18}H_{31}O_4O)_3$ " read " $Ce(C_{18}H_{31}O_4O)_3$."
123	4	,, "(Average temperature)" read "(Room temperature)."
540	4	,, "+ 50.6°" read "— 50.6°."
774	6	,, " $C_{20}H_{14}O_7$ " read " $C_{20}H_{14}O_7$."

* From bottom.

